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ABSTRACT

Selecting an effective prevention program for a comprehensive intervention can be a daunting task. Not only must the program address the specific needs and assets of the defined population, but also there should be a level of confidence about its ability to produce positive outcomes regardless of differing settings and differing populations. The Comparison Matrix presented in this document is a table listing some 150 substance abuse and other problem behavior prevention programs that have been rated according to their effectiveness by five Federal agencies . The Comparison Matrix is intended for use by professionals in the field who wish to identify science-based prevention programs for implementation or for further research purposes. The Comparison Matrix consists of ratings or evaluations of prevention programs made by the Federal agencies that are most widely recognized as offering credible science-based assessments of prevention programs. The assessment criteria used by the various agencies is described in the appendix to indicate the differing approaches or perspectives of the rating agencies. (GCP)

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2002 Conference Edition

Comparison Matrix of Science-Based Prevention Programs

A Consumer's Guide for Prevention Professionals

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Comparison Matrix of Science-Based Prevention Programs

A Consumer's Guide for Prevention Professionals

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Acknowledgments

This document marks CSAP's progress towards fulfilling its commitment to bringing effective, science-based prevention to every community across the country.

One of several in a new series developed by CSAP, this conference-edition document articulates CSAP's policy direction and guidance to the field on prevention programs that we know can be effective in creating positive change. These documents are products of the collaboration among CSAP, the National Prevention Network (NPN), Community Anti-Drug Coalitions of America (CADCA), and representatives from both the research and practice communities. As such, they represent our collective best thought and guidance on effective prevention.

As CSAP continues to build its National Dissemination System to identify and encourage effective prevention and provide capacity building opportunities for States and communities, these documents will evolve in nature and content. Throughout this evolutionary process, CSAP will collaborate with States, intermediary organizations, and community practitioners, and will listen and learn about the challenges encountered in moving the field of prevention forward. CSAP will integrate this feedback, developing new guidance to support the field as it continues to grow and advance.

CSAP is proud of our collaboration with the field and the documents that have resulted. We especially would like to acknowledge the significant contributions of Steven Schinke, Ph.D., a senior social scientist affiliated with CSAP's National Center for the Advancement of Prevention (Contract No. 277-99-6023).

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Comparison Matrix of Science-Based Prevention Programs

Introduction

Selecting an effective prevention program or set of programs for a comprehensive intervention can be a daunting task. Not only must the program address the specific needs and assets of the defined population or neighborhood of interest, but also there should be a level of confidence about its ability to produce positive outcomes regardless of differing settings and differing populations.

Fortunately, it is possible today to make more informed decisions about the critical step of selecting prevention programs, including environmental interventions, than was possible just a few years ago. SAMHSA's Center for Substance Abuse Prevention (CSAP) has played a major role in recent years to this end by identifying programs that have demonstrated successful outcomes.

Other agencies also have made contributions in this field. The Science-Based Prevention Program Comparison Matrix presented in this document is a table listing some 150 substance abuse and other problem behavior prevention programs that have been rated according to their effectiveness by five Federal agencies . The Comparison Matrix is intended for use by professionals in the field—including policymakers, local decisionmakers, collaboratives, and other service providers—who wish to identify science-based prevention programs for implementation or for further research purposes.

The Comparison Matrix consists of ratings or evaluations of prevention programs made by the Federal agencies that are most widely recognized as offering credible science-based assessments of prevention programs. Other agencies have reported on prevention programs but their listings do not enjoy such wide distribution or influence as those of the five agencies shown in the matrix.

CSAP, in particular, has rated more programs than other agencies and uses a broader and more scientifically rigorous framework in evaluation, employing a wider variety of criteria. CSAP's National Registry of Effective Prevention Programs (NREPP) includes not only CSAP-sponsored programs and those not rated elsewhere, but also programs already rated by other agencies. The mission of NREPP is to identify, review, and disseminate effective prevention programs; it also provides a platform for experts to review and evaluate programs using the scientific method.

The Comparison Matrix reveals considerable overlap with ratings among the agencies surveyed. However, this redundancy is a positive feature of the evolving prevention field. When independent evaluations are carried out on a program by different reviewers—even if they do not present uniform conclusions—the prevention field benefits overall.

The assessment criteria used by the various agencies is described in the appendix to indicate the differing approaches or perspectives of the rating agencies.

The Importance of Science-Based Prevention Programs

The field of substance abuse prevention has evolved considerably in recent years. Prevention programs can now be selected and implemented in the knowledge that they will target specific populations, address specific risks, and achieve specific outcomes.

This is because the foundation of contemporary substance abuse and other problem behavior prevention programs is science-based knowledge: i.e., that which has been studied, tested, or researched in a standardized way. Science-based prevention programs may have evolved from the practice community or they may have been developed from the body of research produced by universities and other academic institutions studying the nature of substance abuse problems. Either way, science-based programs have been rigorously tested and studied during their evaluation to determine that their *outcomes are due to the program itself*, and that the results may be achieved over and over in other suitable locations.

Many *science-based* programs have been reviewed by experts in the field according to predetermined standards of empirical research. They are theory-based, have sound research methodology, and can demonstrate that effects are clearly linked to the program itself and not to extraneous factors, elements, or events.

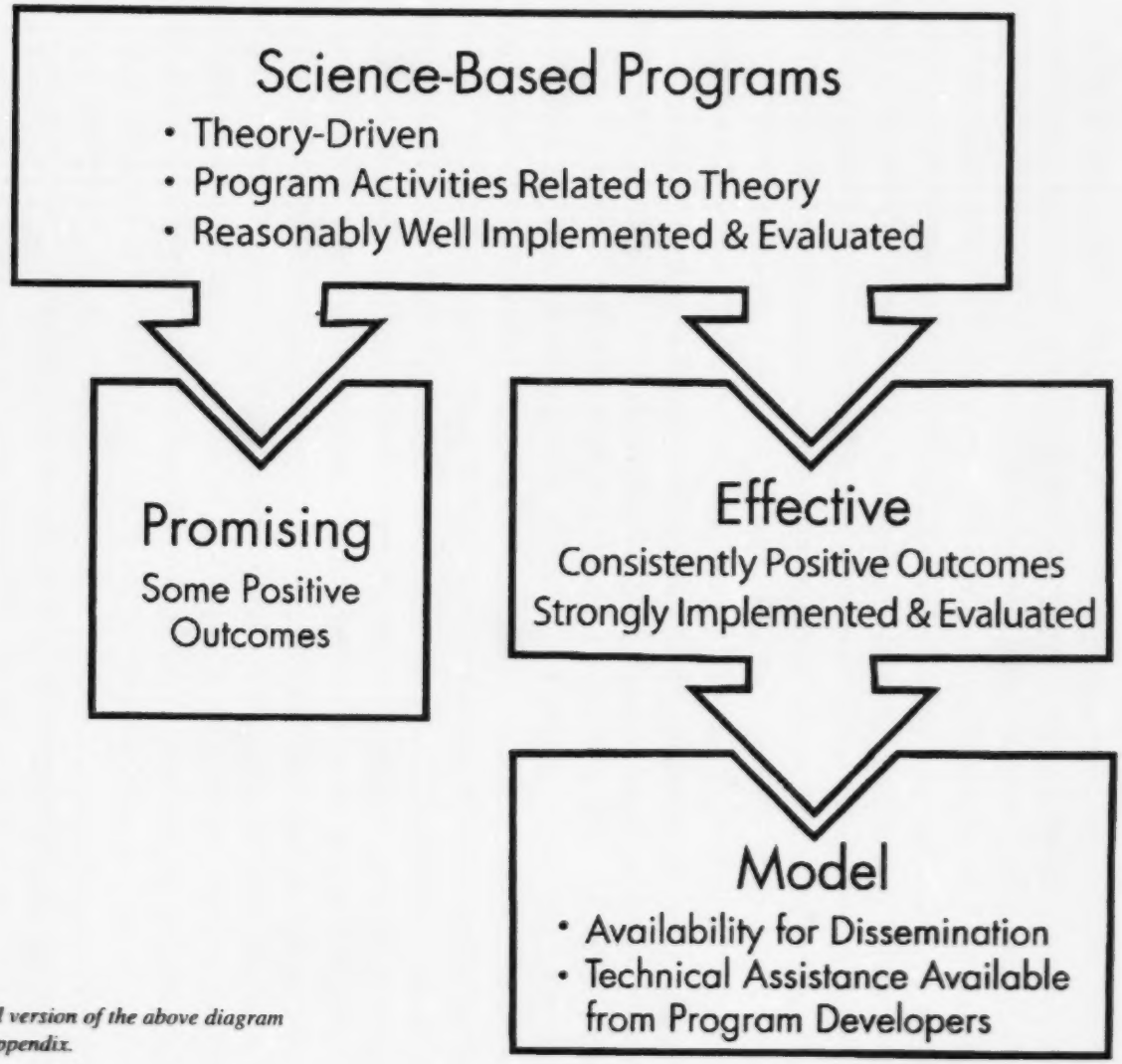
The chief significance of science-based prevention programs for the prevention field lies in their potential for effectiveness and reproducibility. It is important to place emphasis on programs using tested theories or interventions. Innovation is highly desirable, so long as it is based on credible theory.

Using science-based programs listed in the Comparison Matrix in appropriate community, school, or workplace settings will increase the likelihood of success because part of their rating as successful programs is due to their reproducibility.

CSAP defines an *effective* program as a science-based program that produces a consistently *positive* pattern of results. Only programs positively affecting the majority of intended recipients or targets are, therefore, considered effective. Once a program has been evaluated and shown to directly relate to positive results for participants, the program can be implemented with confidence that it will have the same positive results with new participants.

Programs earn the rating *"model"* in CSAP's estimation if they are effective programs whose developers have agreed to participate in CSAP's dissemination efforts and to provide training and technical assistance to practitioners who wish to adopt their programs. Ensuring that programs are carefully implemented maximizes the probability of repeated effectiveness.

See Exhibit 1 for a chart of CSAP's rating categories for science-based programs.



Note: A more detailed version of the above diagram can be found in the appendix.

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Using the Comparison Matrix: Criteria Used in the Evaluation of Programs

The Comparison Matrix displays the program assessments made independently by five agencies. Because each agency made its own determinations, using its criteria, the matrix displays sometimes disparate conclusions by different agencies regarding the same program.

There are several reasons for such discrepancies. Differing terminology accounts for some. Different conclusions may be drawn from a program if the agencies involved have different priorities or concerns or are interested in particular features of a program. For example, whereas the Office of Juvenile Justice and Delinquency Prevention (OJJDP) is interested in delinquency prevention outcomes, the Department of Health and Human Services (DHHS) is more interested in substance abuse outcomes. High-risk youth may be the concern of one agency, while another considers the wider general population. Some agencies seek to report on many programs, whereas others are interested only in reporting on a few.

For example, CSAP, via its National Registry of Effective Prevention Programs (NREPP), reports on many programs across the board; clearly the focus of the Centers for Disease Control (CDC) is HIV-prevention programs. Reports written more recently will include programs not covered by earlier reports. And, naturally, recent reports may include fresh data or material not available to earlier researchers—information that may alter a program's rating from, for example, "Promising" to "Model," to use CSAP's terminology.

Agencies also express different criteria for evaluating programs, which contributes to varying evaluations of the same program. For example, while CSAP has numerous screening criteria for programs, the National Institute on Drug Abuse (NIDA) largely relies on a program's adherence to a set of principles that the agency has developed internally.

The criteria employed by agencies listed in the Comparison Matrix are summarized below. *See the appendix for detailed information on the criteria employed by each rating agency.*

- *National Institute on Drug Abuse* (NIDA), one of the first Federal agencies to catalog effective prevention programs, includes in its "Red Book" programs that have emerged from NIDA-funded research. Though screening criteria for the NIDA "Red Book" remain unspecified, programs need to address 14 principles for inclusion. (See description in the appendix.) NIDA does not distinguish among programs according to different levels of effectiveness.
- *U.S. Department of Education* (DOE) has identified a number of prevention programs as effective and distinguishes among them by categorizing programs as demonstrated models or promising models. Whereas the former have been subjected to rigorous field testing, the latter (though considered to be well designed) lack careful evaluation data. Extensive criteria for Department of Education programs appear in the appendix.
- *U.S. Office of Juvenile Justice and Delinquency Prevention* (OJJDP) has included in its "Blueprints" compendium several prevention programs that meet its five criteria for inclusion, as detailed in the appendix. As with other

programs, OJJDP employs the two-tiered designation of "model" and "promising" to distinguish prevention programs based on its evaluation data.

- *Centers for Disease Control* (CDC) lists prevention programs aimed at reducing the spread of HIV/AIDS. Criteria for inclusion in this listing categorize programs according to whether the intervention employed was behavioral, social, or policy-oriented. The CDC listing includes 24 programs.
- *Center for Substance Abuse Prevention*, through NREPP, employs a sophisticated and scientifically rigorous process using 15 criteria (below) to distinguish whether programs are "promising" or "effective" (or "model"). Examining a range of candidate programs, CSAP includes in its database programs rated by other agencies as well as prevention programs originating from the field or from the scientific literature. Evaluations of these programs are conducted by independent prevention scientists.

The criteria* employed by NREPP include:

- *Theory*: The degree to which programs reflect clear and well-articulated principles about substance abuse behavior and how it can be changed.
- *Intervention Fidelity:* How the program ensures consistent delivery.
- *Process Evaluation:* Whether program implementation was measured.
- *Sampling Strategy and Implementation:* How well the program selected its participants and how well they received it.
- *Attrition:* Whether the program retained participants during program implementation.
- *Outcome Measures:* The relevance and quality of measure for the evaluation
- *Missing Data:* How developers addressed incomplete measurements.
- *Data Collection:* The manner in which data were collected.
- *Analysis:* The appropriateness and technical adequacy of data evaluation.
- *Other Plausible Threats to Validity*: The degree to which evaluators considered other possible explanations for program effects.
- *Integrity*: Overall usefulness of program findings to inform prevention theory and practice
- *Utility:* Overall usefulness of program findings to inform program theory and practice.
- *Replications:* Number of times the program has been used in the field.
- *Dissemination Capability:* Readiness of program to be implemented by others in the field.
- *Cultural- and Age-Appropriateness:* The degree to which the program addresses different cultural and age-related factors.

A detailed discussion of each of the above criteria is included in the appendix.

Note: For more information on CSAP's program evaluation process, see the "Guide to Science-Based Practices" series, specifically "Promising and Proven Substance Abuse Prevention Programs," and the "2001 Annual Report of Science-Based Prevention Programs."These documents are available at www.samhsa.gov/centers/centers.html

Comparison Matrix

The Comparison Matrix displays the program assessments made independently by five agencies. Because each agency made its own determinations, using its criteria, the matrix displays sometimes disparate conclusions regarding the same program.

Moreover, program assessment by CSAP is an ongoing process, with CSAP staff and contractors working constantly to review new programs and to work with developers to move those on the promising and effective lists to model status. Furthermore, when developers are no longer interested in playing as active a role in dissemination and technical assistance as the model program designation requires, their formerly model program might be moved to effective status. This does not mean that the program is any less effective. Check CSAP's model program Web site at www.modelprograms.samhsa.gov/ regularly for updates.

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Across Ages					Model
Adolescent Alcohol Prevention Trial (AAPT)	Effective				Promising
Adolescent Transitions Program	Effective				Insufficient current support
Aggression Replacement Training		Promising			
Aggressors, Victims, and Bystanders: Thinking and Acting to Prevent Violence		Promising			
AIDS Community Demonstration Projects (ACDP)				Effective	Effective
AIDS/Drug Injection Prevention Program				Effective	Promising
All Stars™		Promising			Model
Al's Pals: Kids Making Healthy Choices		Promising			
Asian Youth Alliance (AYA)					Promising
Athletes Training and Learning to Avoid Steroids (ATLAS)	Effective	Exemplary	Promising		Model
Baby SAFE (Substance Abuse Free Environment) Hawaii					Promising
Be a Star					Promising
Becoming a Responsible Teen (BART)				Effective	

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Behavioral Monitoring and Reinforcement Program (BMRP)					Promising (under re-review)
Behavioral Self-Management and Assertion Skills				Effective	
Be Proud! Be Responsible!				Effective	Effective
Big Brothers-Big Sisters of America (BBBSA)			Model		Promising
Bilingual/Bicultural Counseling and Support Services (formerly Proyecto CHAC)					Promising
Border Binge Drinking Reduction Program					Effective
Breathe Easy!					Under review
Brief Alcohol Screening and Intervention for College Students (BASICS)					Effective
Brief Strategic Family Therapy (BSFT)			Promising		Model
CASASTART		Exemplary	Promising		Effective
Challenging College Alcohol Abuse (CCAA)					Effective
Child Development Project (CDP)		Promising			Model
Club Hero					Promising
Cognitive Behavioral Skills Training Group				Effective	

Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Cognitive Behavioral Therapy for Child Sexual Abuse					Effective
Cognitive Behavioral Therapy for Child Traumatic Stress					Effective
Colorado Youth Leadership Project (CYLP)					Promising
Columbia TeenScreen Program					Under Review
Communities Mobilizing for Change on Alcohol (CMCA)					Model
Community of Caring		Promising			
Community Trials Intervention to Reduce High-Risk Drinking (RHRD)					Model
Condom Skills Education				Effective	
Confident Parenting					Under Review
Coping Power					Effective
Creating Lasting Family Connections (CLFC)		Promising			Model
DARE To Be You (DTBY)					Model
Divorce Education for Parents					Under Review
Early Risers "Skills for Success"					Model

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
East Texas Experiential Learning Center					Effective
Effective Black Parenting					Under Review
Facing History and Ourselves		Promising			
Faith-Based Prevention (formerly Jackson County Church Coalition)					Promising
Families And Schools Together (FAST)					Effective
Family Development Research Project (FDRP)			Promising		Effective
Family Effectiveness Training (FET)					Model
Family Health Promotion					Promising
Family Matters					Effective
FAN (Family Advocacy Network) Club					Effective
FAST Track			Promising		
Focus on Families	Effective				Promising
Focus on Kids				Effective	Under Review
Friendly PEERsuasion					Effective
Functional Family Therapy Program			Model		Insufficient current support

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Gatekeeper Case Finding and Response System					Promising
Get Real About AIDS 1992				Effective	Effective
Get Real About Violence (GRAV)					Promising
Girls' Grapevine					Under review
Good Behavior Game			Promising		Effective
Group Discussion Condom Promotion				Effective	
Growing Healthy		Promising			
High/Scope Perry Preschool Project			Promising		Effective
Home-Based Behavioral Systems Family Therapy					Effective
Houston Parent-Child Development Program			Promising		Effective
I Can Problem Solve (ICPS)		Promising	Promising		Promising
Imagine That					Under review
Incredible Years			Model		Model
Informational and Enhanced AIDS Education				Effective	Insufficient current support
Intensive AIDS Education in Jail				Effective	Insufficient current support
Intensive Protective Supervision Project (IPSP)			Promising		

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Keep A Clear Mind (KACM)					Model
Kids Intervention with Kids in School (KIKS)					Promising
Leadership and Resiliency Program (LRP)					Model
Let Each One Touch One Mentor Program		Promising			
LifeSkills™ Training (LST)	Effective	Exemplary	Model	Effective	Model
Linking the Interests of Families and Teachers (LIFT)		Promising	Promising		Promising
Lions-Quest Working It Out		Promising			Insufficient current support
Los Ninos Bien Educados					Under Review
Massachusetts Tobacco Control Program					Promising
Michigan Model for Comprehensive School Health Education		Promising			
Minnesota Smoking Prevention Program		Promising			Insufficient current support
Mpowerment Project				Effective	Effective
Multi-dimensional Treatment Foster Care		Exemplary	Model		Effective
Multimodel Substance Abuse Prevention					Promising

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Multisystematic Therapy (MST)			Model		Model
New Connections: Infant Intervention Program					Promising
Nicasa Parent Project					Under review
Nurse-Family Partnership (NFP)			Model		Model
Olweus Bullying Prevention			Model		Model
Open Circle Curriculum		Promising			
Parent-Child Assistance Program (P-CAP)					Promising
Parenting Partnership					Promising
Parenting Wisely					Effective
PeaceBuilders		Promising			Under review
Peacemakers Program: Violence Prevention for Students in Grades Four through Eight		Promising			Under review
Peer Assistance and Leadership PAL® (formerly Peer Assistance and Leadership Program Services)					Promising
Peers Making Peace		Promising			

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Perinatal Care Program					Promising
Plan A Safe Strategy (PASS) Program					Promising
Popular Opinion Leader (POL)				Effective	Effective
Positive Action (PA)		Promising			Model
Preparing for the Drug-Free Years® (PDFY)		Promising	Promising		Model
Preventive Intervention			Promising		
Preventive Treatment Program			Promising		Insufficient current support
Primary Mental Health Project		Promising			
Program for Young Negotiators					Under review
Project ACHIEVE					Model
Project ALERT		Exemplary			Model
Project BASIS					Promising
Project Break Away					Promising

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Project Family	Effective				
Project Link					Promising
Project Northland: An Alcohol Prevention Curriculum		Exemplary	Promising		Model
Project PACE (Participation and Cooperation in Education)					Promising
Project PATHE			Promising		Insufficient current support
Project RESPECT				Effective	
Project STAR (Students Taught Awareness and Resistance)/Midwestern Prevention Program (MPP)	Effective		Model		Effective
Project STATUS			Promising		
Project SUCCESS (Schools Using Coordinated Community Efforts to Strengthen Students)					Model
Project Toward No Drug Abuse (TND)					Model
Project Toward No Tobacco Use (TNT)		Exemplary		Effective	Model
Prolonged Exposure Therapy (PE)					Effective
Promoting Alternative Thinking Strategies (PATHS)		Promising	Model		Effective
Quantum Opportunities Program			Model		Insufficient current support

Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Reconnecting Youth (RY)	Effective				Model
Reducing AIDS Risk Activities				Effective	Under review
Reducing the Risk				Effective	Under review
Residential Student Assistance Program (RSAP)					Model
Responding in Peaceful and Positive Ways (RIPP)		Promising			Effective
Rural Educational Achievement Project (REAP)					Effective
Say It Straight Training		Promising			Under review
SCARE Program		Promising			
School Health Education					Under review
Schools and Families Educating Children (SAFE Children)					Effective
School Transitional Environment Project (STEP)			Promising		
School Violence Prevention Demonstration Program					Effective
Second Step		Exemplary			Effective
Sembrando Salud					Promising

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
SISTERS					Promising
Skills Building				Effective	Insufficient current support
Skills for Adolescence (SFA)		Promising			Effective
Skills for Managing Anger					Under review
Skills, Opportunities, and Recognition (SOAR) (formerly Seattle Social Development Program)	Effective	Promising	Promising		Effective
Small Group Lecture Plus Skills Training				Effective	
SMART Leaders					Effective
Social Competence Promotion Program for Young Adolescents (SCPP-YA)					Effective
Social Decision Making/Problem Solving		Promising			
Social Skills Training				Effective	
Start Taking Alcohol Risks Seriously (STARS) for Families					Model
Stop Teenage Addiction to Tobacco (STAT)					Effective
Storytelling for Empowerment					Promising
Straight Talk About Risks (Project STAR)		Promising			
StreetSmart				Effective	

Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Strengthening Families Program (SFP)	Effective		Promising		Model
Strengthening Families Program: For Parents and Youth 10-14		Exemplary			
Strengthening Hawaii Families					Promising
Strengthening the Bonds of Chicano Youth and Families					Promising
Students Managing Anger and Resolution Together (SMART) Team		Promising			Model
Students Taking A Right Stand (STARS)					Under review
Support for At-Risk Children					Effective
Teaching Students to Be Peacemakers					Under review
Team Awareness					Effective
Teams-Games-Tournaments Alcohol Prevention (formerly Teams-Games-Tournaments)					Promising
Teenage Health Teaching Modules		Promising			Promising
Think Time Strategy		Promising			Under review
Tinkham Alternative High School					Promising
Too Good For Drugs (TGFD)					Effective

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Programs	Endorsing Agency/Organization				
	NIDA	DOE	OJJDP	CDC	CSAP
Transitions Program					Under review
Urban Women Against Substance Abuse (UWASA)					Promising
Video Opportunities for Innovative Condom Education and Safer Sex (VOICES/VOCES)				Effective	Under review
"Volver a Casa" Return to the Family					Under review
Women and Infants Demonstration Projects (WIDP)				Effective	
Woodrock Youth Development Project					Promising
Yale Child Welfare Project			Promising		Insufficient current support
YouthFriends					Under review

Appendix

Standards for Rating and Including
Prevention Programs in the Comparison Matrix

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National Institute on Drug Abuse (NIDA) "Red Book"

Programs included by NIDA in its "Red Book" address 14 principles:

1. Prevention programs should be designed to enhance "protective factors" and move toward reversing or reducing known "risk factors."
2. Prevention programs should target all forms of drug abuse, including the use of tobacco, alcohol, marijuana, and inhalants.
3. Prevention programs should include skills to resist drugs when offered, strengthen personal commitments against drug use, and increase social competency (e.g., in communications, peer relationships, self-efficacy, and assertiveness), in conjunction with reinforcement of attitudes against drug use.
4. Prevention programs for adolescents should include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone.
5. Prevention programs should include a parents' or caregivers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects, and that opens opportunities for family discussions about use.
6. Prevention programs should be long-term, presented over the school career with repeat interventions to reinforce the original prevention goals. For example, school-based programs directed at elementary and middle school students should include booster sessions to help with critical transitions from middle to high school.
7. Family-focused prevention efforts have a greater impact than strategies that focus on parents only or children only.
8. Community programs that include media campaigns and policy changes, such as new regulations that restrict access to alcohol, tobacco, or other drugs, are more effective when they are accompanied by school and family interventions.
9. Community programs need to strengthen norms against drug use in all drug abuse prevention settings, including the family, the school, and the community.
10. Schools offer opportunities to reach all populations and also serve as important settings for specific sub-populations at risk for drug abuse, such as children with behavior problems or learning disabilities and those who are potential dropouts.
11. Prevention programming should be adapted to address the specific nature of the drug abuse problem in the local community.
12. The higher the level of risk of the target population, the more intensive the prevention effort must be and the earlier it must begin.
13. Prevention programs should be age-specific, developmentally appropriate, and culturally sensitive.
14. Effective prevention programs are cost-effective. For every dollar spent on drug use prevention, communities can save $4 to $5 in costs for drug abuse treatment and counseling.

U.S. Department of Education (DOE)

According to the Department of Education's Web site, which can be found at www.ed.gov/offices/OESE/SDFS/, prevention programs were rated by DOE as exemplary or promising models, depending on how they met the following standards:

1. Exemplary models have been rigorously tested in the field and have solid evidence of their effectiveness. In the evaluation of exemplary models, two groups of youth were examined before and after an intervention; one group received the intervention, while the other (the control group) did not. For a program to be considered an exemplary model, the intervention group demonstrated a larger reduction in violence over time compared to the control group.
2. Promising models are well designed but have not yet been thoroughly tested. Some promising models have been evaluated, but they need further testing with stronger evaluation designs to prove their effectiveness. Other promising models have not yet been evaluated, but they are based on previous research. While some models have effects in more than one area, they are categorized by their emphasis or demonstrated effects. Some models have been developed, implemented, and evaluated in multiple sites, while others have been used only in a single school.

Prevention programs were rated on a scale of 0-3 on each of the following criteria:

A. Evidence of Efficacy

Criterion 1. The program reports relevant evidence of efficacy/effectiveness based on a methodologically sound evaluation.

Condition a. The program evaluation indicates a measurable difference in outcomes that is based on statistical significance testing or a credible indicator of magnitude of effect. Relevant outcomes are factors related to making schools safe, disciplined, and drug-free: reducing substance use, violence, and other conduct problems and showing positive changes in scientifically established risk and protective factors for those problems.

Condition b. The program evaluation used a design and analysis that adequately controls for threats to internal validity, including attrition.

**Note: Some evaluation designs do not meet the criteria for exemplary or promising status. Such designs include the following: (1) pre-post designs without comparison groups; (2) one-time, post-test only, comparison studies without randomization or other efforts to control threats to internal validity; and (3) case studies without comparisons.*

Condition c. The program evaluation used reliable and valid outcome measures.

**Note: Some evaluation measures do not meet the criteria for exemplary or promising status. Such measure of program effects include the following: (1) judgments based on clinical experience, and (2) authoritative evidence such as reports by expert committees and testimonials.*

Condition d. The program evaluation used analyses appropriate to the data.

B. Quality of Program

Criterion 2. The program's goals with respect to changing behavior and/or risk and protective factors are clear and appropriate for the intended population and setting.

Condition a. The program's goals are explicit and clearly stated.

Condition b. The program's goals are appropriate to the intended population and setting.

Criterion 3. The rationale underlying the program is clearly stated, and the program's content and processes are aligned with its goals.

Condition a. The rationale (e.g., logic model theory) underlying the program is clearly stated and includes appropriate documentation (e.g., literature reviews and previous research).

Condition b. The program's content and processes are aligned with its goals.

Criterion 4. The program's content takes into consideration the characteristics of the intended population and setting (e.g., developmental stage, motivational readiness, ethnicity, gender, socioeconomic status, language, disabilities, culture) and the needs implied by these characteristics.

**Note: Content appropriateness will be determined on the basis of the application narrative and the program materials submitted.*

Criterion 5. The program implementation process effectively engages the intended population.

Condition a. The program provides a relevant rationale to participants for its implementation.

Condition b. The program actively engages the intended population.

Condition c. The program attends to participants' prior knowledge, attitudes, and commonly held conceptions.

Condition d. The program implementation methods promote participants' collaboration, discourse, and reflection.

Where applicable:
Condition e. The methods foster the use and application skills.

Condition f. The program promotes multiple approaches to learning.

C. Educational Significance

Criterion 6. The application describes how the program is integrated into schools' educational missions.

D. Usefulness to Others

Criterion 7. The program provides necessary information and guidance for replication in other appropriate settings.

Condition a. The program clearly outlines the essential conditions required to replicate it with fidelity in other settings (e.g., strategies, resources, implementation plans, materials, etc.).

Condition b. The program includes guidelines and materials for training and supporting those who are to replicate it.

**Rating Scale:

Response to Criterion is: 0 = absent
1 = minimally acceptable
2 = adequate
3 = strong

For a prevention program to be deemed "exemplary" by the DOE, it must:

a. have at least one evaluation that has demonstrated an effect on substance use, violent behavior, or other conduct problems one year or longer beyond baseline,

b. receive a rating of "3" on criterion 1,

c. receive a rating of "2" on criteria 2-7, and

d. receive a rating of "3" on at least 3 of the criteria 2-7.

For a prevention program to be deemed "promising" by the DOE, it must

a. have findings from at least one evaluation demonstrating an effect on substance use, violent behavior, conduct problems OR one or more risk and protective factors that research has established as major predictors of these behaviors.

b. receive a rating of "2" or higher on criteria 1-5, and

c. receive a rating of "1" or higher on criteria 6 and 7.

Office of Juvenile Justice and Delinquency Prevention "Blueprints"

According to the "Blueprints" Web site, www.colorado.edu/cspv/blueprints/, prevention programs were rated based on the following criteria:

1. *Strong Research Design.* Experimental designs with random assignment provide the greatest level of confidence in evaluation findings, and this is the type of design required to fully meet this standard. Two other design elements are also considered essential for the judgment that the evaluation employed a strong research design: low rates of participant attrition and adequate measurement. Attrition may be indicative of problems in program implementation; it can compromise the integrity of the randomization process and the claim of experimental-control group equivalence. Measurement issues include the reliability and validity of study measure, including the outcome measure, and the quality, consistency, and timing of their administration to program participants.

2. *Evidence of Significant Prevention or Deterrent Effects.* Relatively few programs have demonstrated effectiveness in reducing the onset, prevalence, or individual offending rates of violent behavior. We have accepted evidence of deterrent effects for delinquency, drug use, and/or violence as evidence of program effectiveness. We also accepted program evaluations using arrests as the outcome measure. Evidence for a deterrent effect on violent behavior is certainly preferable, and programs demonstrating this effect will be given preference in selection, all other criteria being equal. However, this has not proved to be a determining factor in the selection of the first 10 model Blueprints programs.

   Both primary and secondary prevention effects (i.e., reductions in the *onset* of violence, delinquency, or drug use compared to control groups and pre-post reductions in these *offending rates* compared to control groups) meet these criteria. Demonstrated changes in the targeted risk and protective factors, in the absence of any evidence of changes in delinquency, drug use, or violence, were not considered adequate to meet this criterion.

3. *Multiple Site Replication.* Replication is an important element in establishing program effectiveness. It establishes the robustness of the program and its prevention effects and exportability to new sites. This criterion is particularly relevant for selecting model programs for a national prevention initiative where it is no longer possible for a single program designer to maintain personal control over the implementation of his or her program. Adequate procedures for monitoring the integrity of implementation must be in place, and this can be established only through actual experience with replications.

4. *Sustained Effects.* A number of programs have demonstrated initial success in deterring delinquency, drug use, and violence during the course of treatment or over the period during which the intervention was being delivered and reinforcements controlled. This selection criterion requires that these short-term effects be sustained beyond treatment or participation in the designed intervention. For example, if a preschool program designed to offset the effects of poverty on school performance (which, in turn, affects school bonding, present and future opportunities, and later peer group choice/selection; which, in turn, predicts delinquency, drug use, and violence) demonstrates its effectiveness when children start school, but these effects are quickly lost during the first years of school, it is unlikely this program will prevent the onset of violence during the high school years when the risk of onset is at its peak. Unfortunately, there is clear evidence that the deterrent effects of most programs deteriorate quickly once youth

leave the program and return to their original neighborhoods, families, and peer groups (e.g., gangs).

The standard we have set for program selection is very high. Not all of the 10 programs selected meet all of the four individual standards, but as a group they come the closest to meeting these standards that we could find. With one exception, they have all demonstrated deterrent effects with experimental evaluation designs using random assignment to experimental and control groups (the Olweus Bullying Prevention Program involved a quasi-experimental design). All involve multiple sites and thus have information on replications and implementation integrity, but not all replication sites have been evaluated as independent sites (i.e., the Big Brothers/Big Sisters program was implemented at eight sites, but the evaluation was a single aggregated evaluation involving all eight sites). With one exception, all selected programs have demonstrated sustained effects for at least one year post-treatment.

Programs that did not fit all of the criteria for a model program were designated promising programs. Promising programs have a demonstrated quantitative effect on one or more of the following outcome variables: delinquency/crime, violence, drug use, and pre-delinquent aggression (e.g., conduct disorder). Promising programs must have good experimental or quasi-experimental (with control group) design. Programs that have failed to produce a sustained effect do not qualify as promising, although programs that have not yet demonstrated their long-term effects may remain in the Promising category. Promising programs can be single site, unreplicated projects, or have a small effect on outcome measures. Some of these programs may move up into the model program category as more information becomes available.

Centers for Disease Control (CDC)

In 1996, the Centers for Disease Control (CDC) began the HIV/AIDS Prevention Research Synthesis (PRS) project to create a database of all HIV/AIDS behavioral, social, and policy studies. The PRS project has several aims:

(1) To permit systematic reviews that address the population, intervention, study, design, setting, and outcome factors associated with intervention effectiveness;

(2) To identify methodologically rigorous studies that have significant positive results; and

(3) To identify gaps in the existing research and directions for future study.

The PRS database will be updated annually. At present, it contains approximately 5,000 articles and reports on HIV prevention. Of these, about 200 are intervention studies that meet relevance criteria, such as having behavioral or biological outcomes. Further, using criteria for methodological rigor, we identified a subset of 124 primary studies representing the best available intervention science within the scope of the PRS project.

A. PRS Criteria

1. *Relevance criteria* allow the selection of studies that aim to reduce sex- and/or drug-related risk behaviors. Criteria include:

(a) *Studies are reported from 1988 onward*
The study typically was conducted two or three years earlier. This coincides approximately with the start-up of HIV intervention research.

(b) *Published or unpublished*
Unpublished reports are included in the PRS database to minimize the possibility of "publication bias." For purposes of the "Compendium," (see Compendium criteria below) unpublished reports are included in the database to provide access to the latest studies.)

(c) *Conducted anywhere in the world*
Research conducted both in and outside the United States enhances our understanding of risk reduction.

(d) *Had positive, negative and/or no change (null) findings*
The PRS database includes all studies that meet specific standards of scientific vigor, regardless of outcome. Negative and no-change (null) outcomes contribute to our knowledge of what does and does not work.

(e) *With one or more of the outcomes shown in the table that follows:*

Sex–related behaviors	Drug-related behaviors
• use of male condoms • use of female condoms • use of condom negotiation • not having sex, if condom not used • having unprotected sex • number of sex partners • mutually monogamous relationship • partner selection • return to abstinence • initiation of first sexual intercourse • exchanging sex for money/drugs	• multiperson use of drug paraphernalia • cleaning/bleaching drug paraphernalia • use of new sterile needles/syringes • injecting drugs • initiation of drug injection • non-injecting drug use • sex with substance use • return of used syringes
HIV testing behavior	**Health outcomes**
• repeat testing • return for results	• incidence rates of HIV, AIDS, STDs, HBV, and HCV • prevalence rates of HIV, AIDS, STDs, HBV, and HCV

2. *Methodological criteria* are based on study design and vary by intervention category* (see below.) Eligible behavioral and social interventions require control/comparison groups and pre-post data whereas policy interventions may have less rigorous designs.

(a) For behavioral and social intervention studies:

- Random assignment to intervention and comparison groups with pre-post data OR post-only data
- Non-random assignment to intervention and comparison groups with pre-post data AND no apparent assignment bias OR adjustment for apparent assignment bias

(b) For policy studies:

- Random assignment to intervention and comparison groups with pre-post data AND no apparent assignment bias OR adjustment for apparent assignment bias
- Non-random assignment to intervention and comparison groups with post-only data AND non apparent assignment bias OR adjustment for apparent assignment bias
- Pre-post data with no comparison group

*There are three broad categories of interventions:

(1) Interventions in the behavioral category aim to change individuals' behaviors. These tend to emphasize individual and small group approaches (e.g., counseling, small group discussion with skills demonstration).

(2) Interventions in the social category aim to change social norms or structures that influence individuals' behaviors. These interventions may use small group or community-level approaches (e.g., engaging key opinion leaders as educators, community mobilization).

DHHS/SAMHSA/CSAP

(3) Policy studies aim to change individuals' behavior or norms or social structures through administrative or legal decisions (e.g., condom availability in public settings, HIV education in schools).

B. Compendium Criteria

To identify interventions for this Compendium we reviewed the primary studies using additional selection criteria:

1. Studies conducted in the United States
2. Behavioral and social interventions, excluding policy studies
3. Studies with reported positive results on relevant outcomes

We then examined this subset, further selecting studies that met the following criteria:

1. Studies where the positive results represented a statistically significant difference between the intervention and the control or comparison condition
2. Studies with no negative findings
3. Studies that are state-of-the-science

Applying all six of these criteria resulted in the 24 interventions contained in the Compendium. Within the constraints indicated by the criteria listed above, these represent the best state-of-the-science interventions available as of June 30, 1998. Consistent with these pre-established criteria, many studies were not selected for the Compendium. We did not select, for instance, studies where there was no control or comparison condition in the study design. Many of these studies with other designs provide valuable information but are out of the scope of this Compendium.

Center for Substance Abuse Prevention (CSAP) National Registry of Effective Prevention Programs

To assist its practice and policymaking constituents in learning more about science-based prevention programs, CSAP created a National Registry of Effective Prevention Programs (NREPP) to identify, review, and disseminate effective prevention programs. In identifying programs, NREPP seeks candidate prevention programs from the practice community and from the scientific literature. NREPP employs a sophisticated and scientifically rigorous review process through which independent prevention scientists rate programs according to 15 criteria, reviewed below.

NREPP Review Criteria

- *Theory*: The degree to which programs reflect clear and well-articulated principles about substance abuse behavior and how it can be changed.
- *Intervention Fidelity:* How the program ensures consistent delivery.
- *Process Evaluation:* Whether program implementation was measured.
- *Sampling Strategy and Implementation:* How well the program selected its participants and how well they received it.
- *Attrition:* Whether the program retained participants during program implementation.
- *Outcome Measures:* The relevance and quality of measure for the evaluation
- *Missing Data:* How developers addressed incomplete measurements.
- *Data Collection:* The manner in which data were collected.
- *Analysis:* The appropriateness and technical adequacy of data evaluation.
- *Other Plausible Threats to Validity*: The degree to which evaluators considered other possible explanations for program effects.
- *Integrity*: Overall usefulness of program findings to inform prevention theory and practice
- *Utility:* Overall usefulness of program findings to inform program theory and practice.
- *Replications:* Number of times the program has been used in the field.
- *Dissemination Capability:* Readiness of program to be implemented by others in the field.
- *Cultural- and Age-Appropriateness:* The degree to which the program addresses different cultural and age-related factors.

Materials on candidate prevention programs are distributed to the independent raters who score the programs on each criterion. Then, ratings are compiled, averages calculated, and summary scores assigned. Summary scores are based on a program's overall *integrity*, for which raters assess the scientific foundation of program effectiveness, and on a program's *utility*, for which raters determine the positive valence of outcome change for a program. For these two parameters—integrity and utility—programs are designated as promising if they score between 3.33 and 4.0 on a 5-point scale, where 5 represents the best score. In this context, promising means that the programs hold promise for the prevention field, though the available scientific data does not permit a strong recommendation that these programs are ready for large-scale dissemination.

Programs that have integrity and utility scores of 4.0 or greater are designated as effective, meaning that their underlying data are strong and support their wide dissemination. Effective programs undergo an additional level of review by a second panel of experts who evaluate the program's suitability for eventual distribution. Programs that are neither promising nor model are considered to have insufficient current support for their efficacy and are so designated.

Once reviewed and found effective, model programs are disseminated through a Web site that CSAP has dedicated to this task: www.modelprograms.samhsa.gov/ Practitioners and organizations wishing to adopt model programs may receive additional technical assistance from CSAP. In addition, model program developers are committed to assisting the field in implementing their programs under conditions optimal to achieving positive effects.

Review Criteria

Recognizing the importance of the NREPP process for moving the field toward greater adoption of science-based programs, each of the 15 criteria for evaluating candidate programs is discussed in detail below:

Theory refers to the principles that underlie a prevention program. For substance abuse prevention, theory explains substance abuse and how it can be changed. Understanding the determinants of substance abuse behavior is the first step in tailoring a successful intervention to reduce or eliminate the behavior. For example, social-learning theory argues that substance abuse is a learned behavior, resulting from modeling, influence, and reinforcement. Mindful of that theory, a program developer can build an intervention aimed at positively affecting social influence. Such an intervention might focus on building personal skills, such as assertion and problem solving, to counter negative social influences.

Intervention fidelity is the quality of program delivery. Fidelity of a program is essential to determining whether the program caused measured outcome effects. The absence of fidelity would happen if practitioners differed in the number of program sessions they delivered, in the length of time they provided for each session, or in the number of curriculum objectives addressed. Some delivery agents may choose to skip certain sessions of a prevention curricula altogether; others may reorder sessions; and still others may deliver the program exactly as written. Not surprisingly, research suggests that when field agents are faithful to the details of a program, its recipients benefit more.

Process evaluation measures assess program implementation. These measures include attendance data, participant feedback, and whether program delivery adhered to implementation guidelines. As such, process data can reveal how a program was implemented. These data in turn may explain the success or failure of the program. If, for example, a program is designed to be delivered sequentially and with peer leaders, but process data reveal that the program was delivered out of sequence and with other leaders, researchers gain a better understanding of why the program may have failed to achieve the desired effects.

Sampling strategy and implementation concern the selection and handling of program recipients. For this criterion category, prevention program reviewers focus on the size and type of test sample, on the adequacy of controls over who received the program and who did not, and on the way program developers determined how the program was tested. For example, greater weight is placed on programs tested with large, representative samples and employing control or comparison groups and random assignment to them. Any compromises in these standards result in a lower assessment of the rigor of program evaluation procedures.

Attrition refers to the number of participants lost over the course of a program evaluation. Though some loss is inevitable due to transitions among program recipients, attrition rates that exceed 30 percent generally do not bode well for the confidence that reviewers place in outcome findings.

Outcome measures should assess actual behavior change—whether program recipients use substances—as well as other variables associated with substance use.

Outcome measures also should quantify what they allegedly assess (i.e., they should be valid) and they must show consistent results (i.e., they must be reliable).

Missing data is not the same as attrition. Whereas the latter refers to the rate at which participants prematurely leave a prevention research study, missing data is information unavailable from participants who remain involved. A large amount of missing data implies flawed measurement procedures or faulty assumptions about study participants and can threaten the integrity of an evaluation.

Data collection, as a criterion in rating prevention programs, focuses on the quality of measurement procedures. Strong prevention studies collect data using unbiased procedures. Participant subject data are anonymous or at least confidential, and researchers ensure that data are coded and stored in a manner that protects individual identities.

Analysis means the appropriateness of data analytic techniques for determining the success of a prevention program. Effective substance abuse prevention programs employ state-of-the-art data analytic techniques, and analyze by participant subgroup. Researchers should use the most suitable and current methods for measuring outcome change. Subgroup analyses allow researchers to find outcomes by participants' gender, age, and ethnicity, for example.

Other plausible threats to validity are those factors that permit alternative explanation of prevention program outcomes. To satisfy this criterion, a study design must establish a causal link between the program and its alleged outcomes. If, for example, researchers claim that their prevention program caused lower use rates, the researchers must be able to rule out other factors that could explain reductions in use, such as competing programs, concurrent media campaigns, and the effects of maturation among study participants.

Integrity reflects the overall confidence reviewers can place in the findings of a prevention program's evaluation. Confidence is derived from positive assessments of the quality of the intervention implementation, the design of the evaluation study, and how well the evaluation was carried out. This criterion requires the reviewers to summatively rate the merits of the science that went into the evaluation.

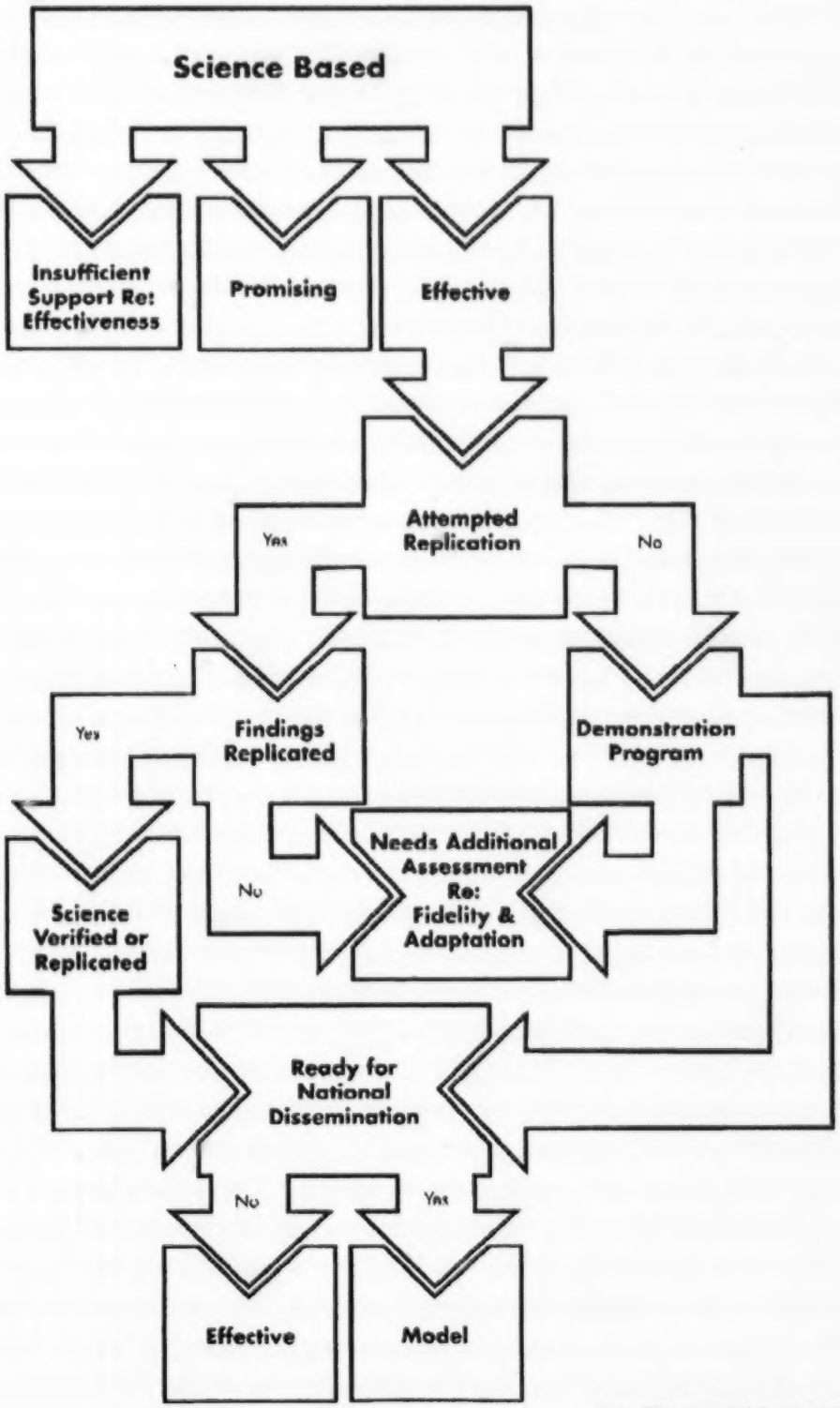
Utility parallels integrity as a summative rating and is an overall assessment of the value of program findings to guide subsequent prevention programs. Simply put, the criterion of utility describes whether and to what degree a program is appropriate for widespread application and dissemination.

Replications are the number of instances in which a program has been evaluated. Even when a program shows effectiveness in one study, other independent evaluations can prove that the study findings were not unique to a single investigation.

Dissemination capability concerns the readiness of program materials for use by others. For example, a program with strong dissemination capability would offer such services and materials as training, technical assistance, standardized curricula, manuals, fidelity instrumentation, videos, recruitment forms, and other program resources to facilitate dissemination.

Cultural- and age-appropriateness is a hallmark of programs that have been tested with diverse groups of participants. Culturally appropriate prevention programs mirror the cultural values of the target group. They include intervention strategies and components that reflect cultural characteristics and behavioral preferences and expectations of the targeted group. Similarly, developmentally appropriate substance abuse prevention programs are tailored for the cognitive and emotional proclivity of different age ranges.

CSAP's Typology of Science-Based Programs



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Comparison Matrix of Science-Based Prevention Programs
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Please rate your satisfaction with following dimensions of the Comparison Matrix:

CONTENT	Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
1. Relevance of the information					
2. Accuracy of the information					
3. Timeliness of the information					

FORMAT	Very Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Very Satisfied
1. Overall Presentation					
2. Readability					
3. Organization					

UTILITY	Very Useless	Somewhat Useless	Neutral	Somewhat Useful	Very Useful
1. This product will be useful this time next year.					
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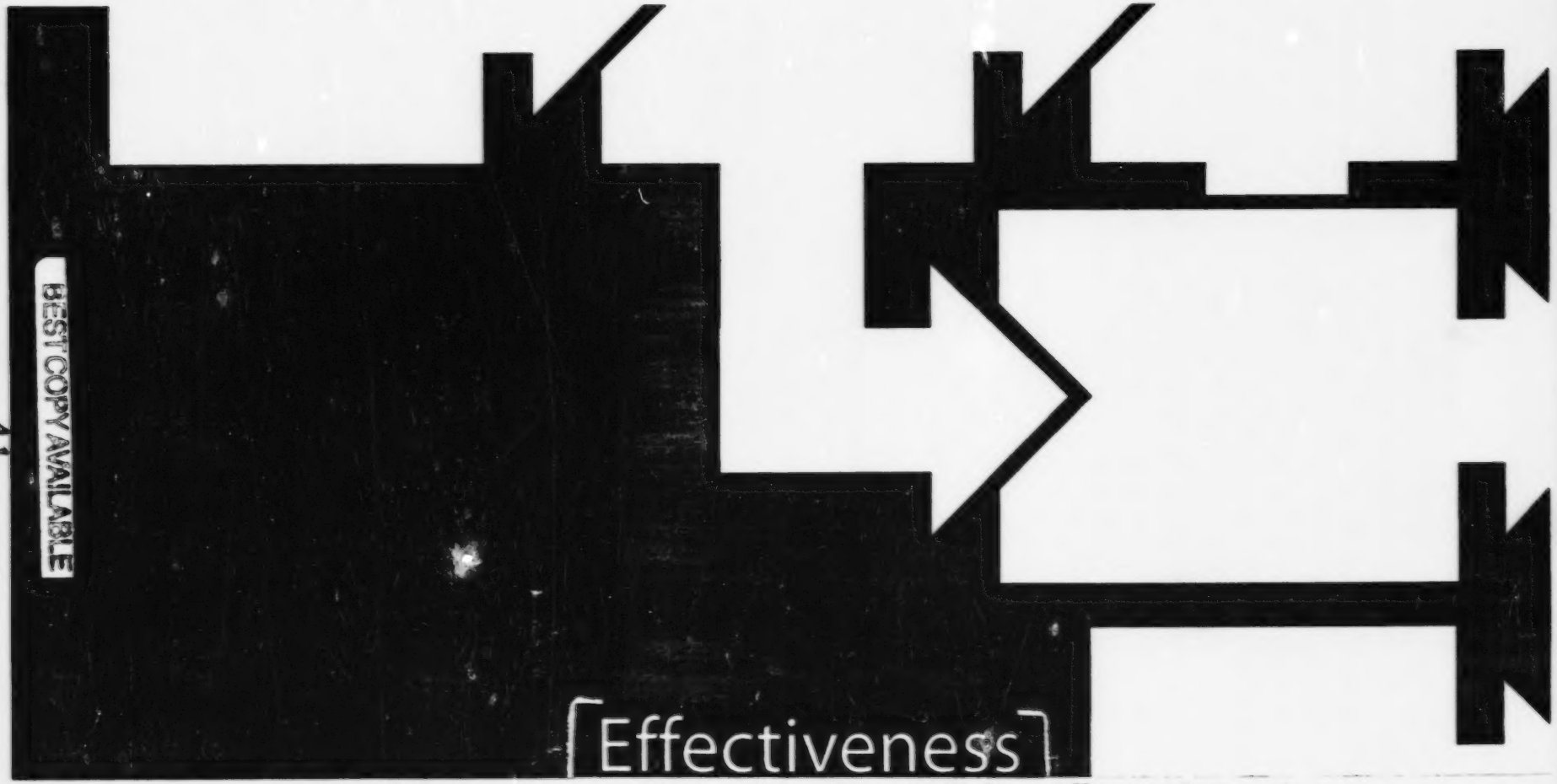

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